

APPENDIX C

USEPA October 2000 Sampling and Analytical Results

Oct 2000
sample

USEPA REGION 9 LABORATORY
REPORT NARRATIVE

CASE NUMBER: R01S07
SAMPLE DELIVERY GROUP: 00299B, 00299C
PROGRAM: SUPERFUND
DOCUMENT CONTROL #: ESTW-9B-3810
DATE: 11/07/00
ANALYSIS: METALS
SAMPLE NUMBERS:

<u>SAMPLE ID</u>	<u>LABORATORY SAMPLE ID</u>
T-1	AB28925
T-2	AB28926
T-3	AB28927
T-4	AB28928
T-5	AB28929
T-6	AB28930
T-7	AB28931
T-8	AB28932
T-9	AB28933
T-10	AB28934
T-11	AB28935
SALT-1	AB28936
SALT-2	AB28937
SALT-3	AB28938
SALT-4	AB28939
SALT-5	AB28940
SALT-6	AB28941
SALT-7	AB28942
SALT-8	AB28943
SALT-9	AB28944
SALT-10	AB28945
SALT-11	AB28946

GENERAL COMMENTS

Twenty two solid samples were received from the Anaconda Copper Mine, Yerington Superfund project on 10/25/00.

The samples were analyzed for metals following SW-846 Methods 6010, 7471 and 7000 (GFAA metals). All mercury samples were analyzed within the required 28-day holding time. All other elements were analyzed within the required 180-day holding time. The sample results are reported in mg/Kg dry weight.

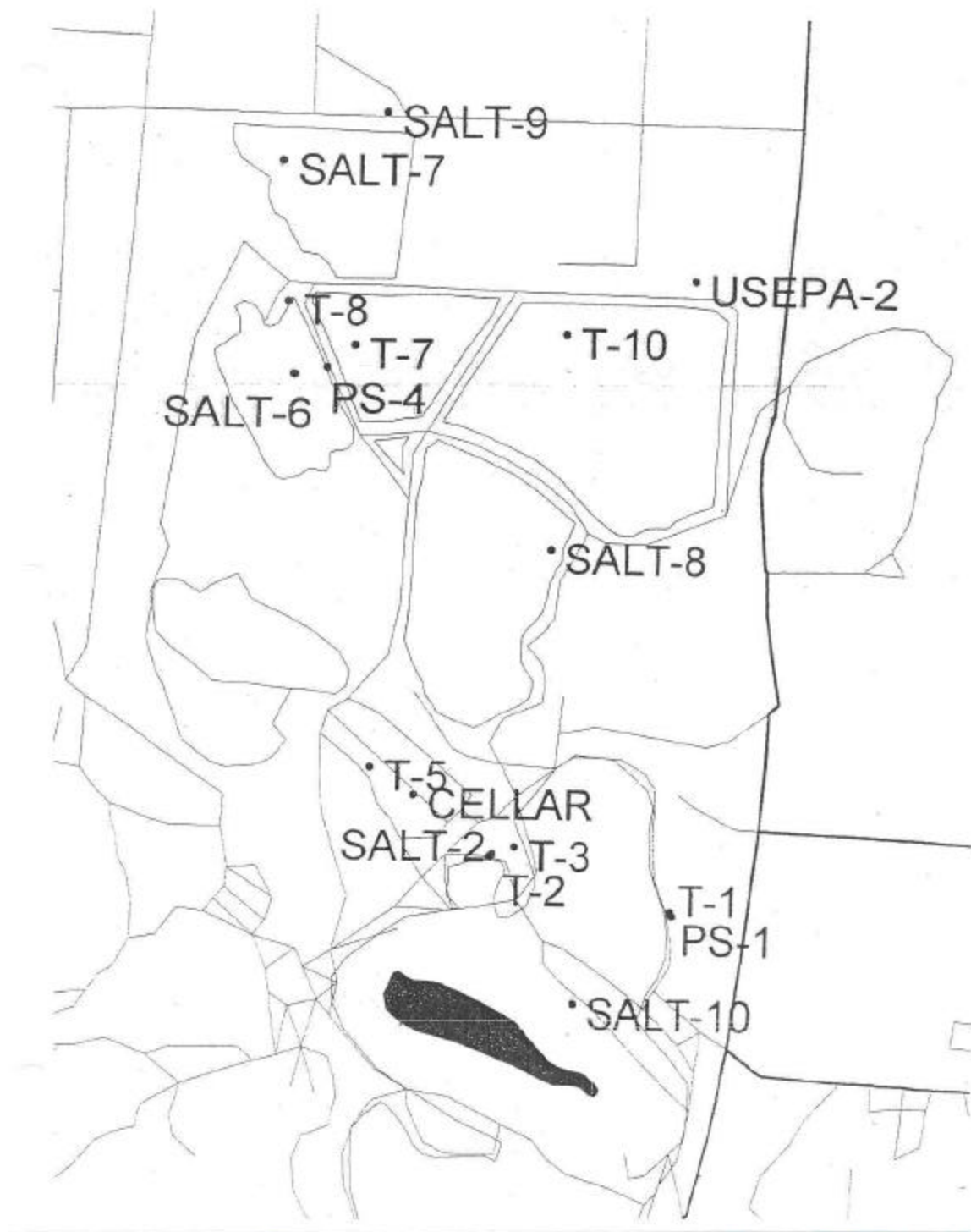
SAMPLE RECEIPT AND PRESERVATION

Samples T-1, T-2, T-3, T-4, T-5, T-6, T-7, T-8, T-9, T-10 and T-11 were received at 10°C, which is outside the 2-8°C temperature requirements. It is believed that this discrepancy will not have an effect on the metals results.

DISCUSSION

The following comments appear on the Summary of Analytical Results:

Sample	Location description
CELLAR	Flooded cellar at process fac.
PS-1	slot collection pond
PS-2	Raffinate #2 Pond
PS-3	Megapond
PS-4	VLT leachate pad
PS-5	Duplicate of PS-4
SALT-1	slot collection pond
SALT-2	Raffinate #1 Pond
SALT-3	Phase I leach pad
SALT-4	Megapond
SALT-5	VLT leachate pad
SALT-6	North of VLT pad
SALT-7	Anaconda tailings leach pond
SALT-8	Sulfide tailings impoundment
SALT-9	North of Luzier Ln.
SALT-10	Slot area near USEPA-3
SALT-11	Duplicate of SALT-2
T-1	slot tailings pile
T-2	sulfide dump pile
T-3	Phase I tailings leach pad
T-4	Anaconda Oxide stockpile
T-5	Phase II leach pad
T-6	VLT leachate pad
T-7	Anaconda sulfide tailings pond
T-8	Iron bleed tailings pond
T-9	Anaconda tailings leach pond
T-10	Sulfide tailings impoundment
T-11	Duplicate of T-2
MW-2	Monitoring well south of VLT stockpile
MW-4	Monitoring well northwest of VLT pad
MW-5	Monitoring well near NE corner of VLT leach pad.
USGS-13	Monitoring well North of site
USGS-25	Monitoring well near old power plant north of site.
USEPA-2	Downgradient monitoring well at Luzier Ln and HWY 95A
USEPA-4	Duplicate of MW-4



Case number: K 37

Site: PPER MINE, YERINGTON

SDG: 00299B, 00299C

Date: 11/07/00

Analysis:	Metals
Matrix:	Solids

[illegible]

100 - Comments refer to the corresponding section in the report narrative for each letter.

A - Not Applicable.

N - Not Realized

Palmitic acid 10:1 - 37

- Refer to data qualification.

- The parameter was analyzed for but was not detected. 95.00% sensitivity

The associated value of α was not

estimates an estimated value is an estimated

NAME: VERINGTON
 DATE: 11/07/00
 OFFICE: PPER MINE, VERINGTON
 DG: 00299B, 00299C
 DATE: 11/07/00

Analysis:	Metals
Matrix:	Solids

[illegible]

Comments refer to the corresponding section in the report narrative for each letter.

Not Applicable

Not Required.

Refer to data on L1C.

The parameter was analyzed (or, but was not detected). The associated value is the sample quantification limit adjusted for dilution, if any. The associated value is an estimated quantity.

Analysis: Metals
Matrix: Solids

Sample No. Sample I.D.	N/A SALT-8 AD28943 10/17/00			N/A SALT-9 AD28944 10/17/00			N/A SALT-10 AD28945 10/21/00			N/A SALT-11 AD28946 10/19/00			ICP Reagent Blank-1 N/A			GFAA Reagent Blank-1 N/A				
	mg/kg	Result	Q	Com	mg/kg	Result	Q	Com	mg/kg	Result	Q	Com	mg/kg	Result	Q	Com	mg/kg	Result	Q	Com
1	20	U			20	U			30	U			30	U			20	U		
2	20	110			110				20	U			40				10	U		
3	20	1	U		1	U			2	U			2	U			1	U		
4	15				15				2	J	A		35				2	U		
5	850				850				130000				85000				4	U		
6	70				70				5				55000				30	U		
7	6				6				1500				460				10	U		
8	10				10				150				40				10	U		
9	8				8				10	U			10	U			N/A			
10	10000				10000				2700				1900				100	U		
11	29				29				7	U			11				4	U		
12	96				96				60				72				N/A			

Notes: Comments refer to the corresponding section in the report narrative for each entry.

Comments refer to the corresponding section in the report narrative for each letter

- Not Applicable

• Not Required.

Refer to data available

The parameter was unity

The associated value is a

center are in moth.

And 2.9/3.0 in air mass

File name: 00195C.m

LAWRENCE W. WILSON

二五

505

Date:

Analysis: Metals
Matrix: Solids

[illegible]

Comments refer to the corresponding section in the report narrative for each letter.

A - Not Applicable

III - Not Required

Refer to data qualification.

The parameter was analysed for, but was not detected. The associated value is the sample quantitation limit, adjusted for dilution, if any. The associated value is an estimated quantity.

Sample	Location description	easting	UTM		longitude		latitude		decimal degree	
			northing	deg min sec	deg min sec	deg min sec	deg min sec	deg min sec	longitude	latitude
PS-1	slot collection pond	310502.6	431764.9	119	11	12.89	38	59	24.12	119.1869 38.98033
T-1	slot tailings pile	310584.5	431797.0	119	11	13.44	38	59	24.08	119.1871 38.98027
SALT-1	slot collection pond	310584.5	431797.0	119	11	13.44	38	59	24.08	119.1871 38.98027
T-2	sulfide dump pile	309563.2	4318238	119	11	51.81	38	59	32.78	119.1978 38.98244
SALT-2	Raffinate #1 Pond	309679.6	4318250	119	11	51.19	38	59	33.27	119.1978 38.98258
PS-2	Phase 1 tailings leach pad	309879.0	4318285	119	11	51.19	38	59	33.27	119.1978 38.98258
T-3	Raffinate #2 Pond	309785.3	4318285	119	11	40.87	38	59	34	119.1964 38.98278
T-4	Phase 1 leach pad	309785.3	4318285	119	11	40.87	38	59	34	119.1964 38.98278
SALT-3	Phase 1 leach pad	309785.3	4318285	119	11	40.87	38	59	34	119.1964 38.98278
T-5	Phase 2 leach pad	309854.7	4318680	119	12	17.17	38	59	46.92	119.2048 38.99837
SALT-4	Phase 2 leach pad	309854.7	4318680	119	12	17.17	38	59	46.92	119.2048 38.99837
PS-3	Megapond	309064.7	4316566	119	12	17.17	38	59	46.92	119.2048 38.99837
PS-4	VLT leachate pond	308807.1	4320743	119	12	29.99	39	0	53.33	119.2093 39.01481
SALT-5	VLT leachate pond	308807.1	4320743	119	12	29.99	39	0	53.33	119.2093 39.01481
T-6	VLT leachate pond	308807.1	4320743	119	12	29.99	39	0	53.33	119.2093 39.01481
T-7	Anaconda sulfide tailings pond	308944.1	4320855	119	12	24.43	39	0	57.13	119.2068 39.01587
T-8	iron bleed tailings pond	308610.4	4321075	119	12	38.35	39	0	52.94	119.2107 39.01779
SALT-6	North of VLT pond	308652.9	4320708	119	12	38.32	39	0	52.94	119.2107 39.01779
SALT-7	Anaconda tailings leach pond	308576.9	4321774	119	12	40.78	39	1	26.92	119.2113 39.02408
T-9	Anaconda tailings leach pond	308576.9	4321774	119	12	40.78	39	1	26.92	119.2113 39.02408
SALT-8	Sulfide tailings impoundment	309909.7	4320917	119	11	41.02	39	0	59.92	119.1947 39.01664
SALT-9	Sulfide tailings impoundment	309909.7	4320917	119	11	41.02	39	0	59.92	119.1947 39.01664
CELLAR	Flooded cellar at process fac	308279.8	4318545	119	12	6.1	39	59	41.9	119.2023 38.98487
SALT-10	North of Lyder In.	309090.7	4322013	119	12	19.9	39	1	34.78	119.2055 39.02633
SALT-11	Slot area near USEPA-3	310098.9	4317507	119	11	18.28	38	50	34.57	119.1864 38.99284
USEPA-2	Downgradient monitoring well	310840.6	4321197	119	11	15.28	39	1	12.52	119.1876 39.02014

Note: Locations are taken with a hand-held GPS unit with no differential correction. Estimated error is +/- 10 meters, according to Trimble, Inc. Locations have not been peer reviewed for technical accuracy.

Note: GPS locations were not recorded for existing monitoring wells sampled. These include MW-2, MW-4, MW-5, USGS-2B, and USGS-13.

PS = prepared solutions from leach pads

SALT = leachate tail materials found in association with pond areas and seeps

T = tailings materials, which includes millings, tailings, and stockpiled ores.

SUMMARY OF ANALYTICAL RESULTS

Case Number: R01587
 Site: CONDA COPPER MINE, VERRINGTON
 SDG: 00299D/00299E/00299F
 Date: 11/04/00

Analysis: Metals
 Matrix: Aqueous Samples

Sample No.	Sample ID	Lab Sample ID	Date of Collection	Units	Analysis	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com
Aluminum (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Asbestos (200.8)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Bromine (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Calcium (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Cobalt (200.8)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Copper (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Iron (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Manganese (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Mercury (245.3)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Nickel (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Potassium (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Silver (200.8)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Sulfur (200.8)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Titanium (200.8)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952
Zinc (200.7)	Unfiltered	AD28947	10/22/00	ug/L	N/A	Unfiltered	AD28948	10/22/00	ug/L	N/A	Unfiltered	AD28950	10/22/00	ug/L	Unfiltered	AD28951	10/22/00	ug/L	Unfiltered	AD28952

Cons - Consistent refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable

NR - Not Required

Q - Refer to data qualifiers

U - The parameter was analyzed but was not detected. The associated value is the sample quantitation limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity

Tablename: 00299D264

SUMMARY OF ANALYTICAL RESULTS

Case Number: R01S07
 Site: CONDA COPPER MINE, VERINGTON
 SIC: 09299D/00299E/00299F
 Date: 11/04/00

Analyte: Metals
 Matrix: Aqueous Samples

Sample No.	N/A	Result	Q	Com	N/A	Result	Q	Com	N/A	Result	Q	Com	N/A	Result	Q	Com
Sample ID:	USGS-13 Unfiltered				MW-2 Filtered				MW-4 Filtered				MW-5 Filtered			
Lab Sample ID:	AD18953				AD18954				AD18955				AD18956			
Date of Collection:	10/22/00				10/22/00				10/22/00				10/22/00			
Units:	ug/L				ug/L				ug/L				ug/L			
Analyte	Result	Q	Com		Result	Q	Com		Result	Q	Com		Result	Q	Com	
Aluminum (200.7)	18000				120000				1300				220000			
Antimony (200.8)	60				190				10				400			
Arsenic (200.8)	1				30				1				270			
Beryllium (200.7)	350000				390000				6600				310000			
Calcium (200.7)	10				750				5				7400			
Cadmium (200.8)	17000				1400000				900				600000			
Copper (200.7)	92000				150000				8100				160000			
Cobalt (200.8)	0.2				0.2				0.1				0.1			
Iron (200.7)	6000				35000				5000				26000			
Magnesium (200.7)	5				10				5				5000			
Manganese (200.7)	5				10				5				20			
Mercury (200.8)	5				10				5				5			
Molybdenum (200.7)	5				10				5				5			
Nickel (200.7)	60				3800				10				20			
Potassium (200.7)													14000			
Silver (200.8)																
Selenium (200.8)																
Sulfur (200.8)																
Thallium (200.8)																
Zinc (200.7)																

Unit - Comments refer to the corresponding section in the report narrative for each level.

N/A - Not Applicable.

NR - Not Reported.

Q - Refer to data quality.

J - The parameter was analyzed for, but was not detected. The associated value is the sample quantitation limit, adjusted for dilution, if any.

U - The associated value is an estimated quantity.

ELFA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R01507

Site: CINDA COPPER MINE, YERINGTON

SDG: 00298D/00299E/06299F

Date: 11/04/00

Analysis: Metals
Matrix: Aqueous Samples

Slot: R01507 Pond
R01507 Pond
LT Leachate

Sample No.	Sample ID	Lab Sample ID	Date of Collection	Matrix	Analysis	Result	Q	Com	Result	Q	Com	Result	Q	Com
Aluminum (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Asbestos (200.4)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Beryllium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Barium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Calcium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Chromium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Cobalt (200.8)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Copper (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Iron (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Manganese (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Nickel (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Mercury (245.1)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Potassium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Selenium (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Silver (200.5)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Thallium (200.3)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000
Zinc (200.7)	PS-1	AB28961	10/15/00	101500	101500	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000	13100000

Com - Comments refer to the corresponding sections in the report narrative for each letter.

N/A - Not Applicable

NIR - Not Required

Q - Refer to data qualifiers

U - The parameter was analyzed for, but was not detected. The associated value is the sample quantitation limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Filename: JM

LABORATORY REPORT SUMMARY OF ANALYTICAL RESULTS

Case Number: 101507
 Site: CONDA COPPER MINE, VERINGTON
 SDG: 001993/ 001994/ 00299P
 Date: 11/04/00
 Analysis: Metals
 Matrix: Aqueous Samples

Sample No.	N/A	CELLAR	N/A	Reagent	Blank	200.7	Quantitation	200.7
Sample ID.	PS-5	AB28965	AB28966	Blank	N/A	Reagent Blank	Limit	Quantitation
Date of Collection	10/19/00	10/19/00	10/19/00	Blank	N/A	Reagent Blank	Limit	Quantitation
Units	ug/L	ug/L	ug/L	Blank	ug/L	Reagent Blank	Limit	Quantitation
Analyte	Result	Q	Can	Result	Q	Can	Result	Quantitation
Aluminum (200.7)	880000			1000000			300	Result
Antimony (200.7)	500	U		700			20	300
Artenic (200.8)	340			1100			1	
Boron (200.7)	410000			640000			100	
Calcium (200.7)	22000			47000			5	
Cobalt (200.8)	510000			1700000			100	20
Copper (200.7)	7400000			16000000			500	
Iron (200.7)	130000			30000			0.2	
Magnesium (200.7)	100	U		300			5000	
Manganese (200.7)	100	U		300			3	
Mercury (200.7)	100	U		300			5	
Nickel (200.7)	100	U		300			5	
Platinum (200.7)	100	U		300			5	
Potassium (200.7)	100	U		300			20	
Silver (200.8)	100	U		300				
Sulfur (200.8)	100	U		300				
Titanium (200.8)	100	U		300				
Vanadium (200.8)	100	U		300				
Zinc (200.7)	19000			120000				

Q - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable

NR - Not Required

Q - Refer to data quality.

U - The parameter was analyzed for, but was not detected. The associated value is the sample quantitation limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.